

Abstract of the Disclosure:

Apparatus and methods for joining similar pieces of plastic pipe includes using the shape memory of the pipe pieces to slightly deform a “female” end to permit insertion therein of a non-deformed male end. The deformation is sufficient to permit the insertion but not so large as to preclude the substantially complete “recovery” of the female end’s shape and size, using the “shape memory” of the pipe material. Embodiments include, without limitation, single-walled (or mono-walled) pipe, pipe formed from multiple material layers, corrugated pipe, flat-walled pipe, and others. Preferred tools and apparatus are disclosed for stretching the female end and maintaining the desired stretch during transportation and storage, for sealing the joint (via adhesive/sealant, flange gasket, O-ring, or the like), and for further protecting the resulting joint.

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